

This would not prepare her very well for following in the family tradition of raising hogs as 4-H projects and knowing generally what goes on on a farm.

We know that about half of farm women work outside the home.

As a result, *Successful Farming* has featured child care stories. This is another departure for farm magazines. It is a risk, of course, since a certain percentage of our readers do not approve of child care. I could read you their letters.

We know that about half of farm women work outside the home. If they do not work off-farm, they are often expected to help with the livestock or drive and operate equipment during planting and harvest.

Our most recent child care article featured an Iowa day care center and a farm woman's role in helping to lead a community effort to expand that center. We contributed a modest amount to its completion as a sign of our support for the importance of this issue to farm safety for children.

Last year, I made a comment in my monthly magazine column that a tractor cab was no place for a small child. That provoked a very forceful letter from a Michigan farm woman. She said that taking a child in a tractor cab was safer than in a car travelling sixty miles per hour.

I ran her letter in a subsequent column and asked readers to comment. I received about 30-35 letters in response, a fair amount of response for any item in the magazine.

The letters reflected a mixture of opinions. There were many from women who agreed with my Michigan critic. Many women who were grandmothers wrote to say that they had taken their children with them as they worked on the farm and never had any reason to regret it.

Other younger farm women said that their labor was needed on the farm today. They did not, number one, have enough money to pay someone to watch the children, or, two, close relatives who were available for babysitting.

As a result, five-year-olds are playing in pick-up campers or pick-ups parked at the end of the field. Their mothers are checking on them at the end of each round. Smaller kids are riding in the tractor cab and combine. The mothers feel as if they have no choice.

On the other hand, I received a good number of letters from women and men who said that taking children in the tractor was unsafe. The children could suffer from hearing damage, dust, and fumes. They said they would not try to care for a child in a moving tractor as they would not in a moving car.

The topic of farm safety, particularly for children, is now in the limelight. When the awareness level is high, we have a golden opportunity to make the leap to changing behaviors.

In farm health, we are confronting obstacles such as inadequate financial resources in rural communities, lack of health insurance among rural individuals, and a financially threatened network of hospitals. These problems are compounded, in some cases, by uninformed policy makers.

For instance, just last week I picked up an article featuring an interview with the chairman of a nonprofit health policy research organization in Minnesota called Interstudy. I cannot tell you how amazed I was to learn that:

*There's very little evidence that the lesser amounts of health resources in the upper Midwest rural areas are having an adverse effect on people's health. Perhaps, because they live healthy lives. They're not exposed to the detrimental effects of the city like pollution, for example, and they generally get more exercise. So, I am not persuaded that the lesser intensity of health care that's available in rural areas is necessarily bad for rural residents' health.*

I am here to tell you today that farm life is not necessarily healthy. As you know, there are people living in urban areas who worry about applying pesticides to their lawns to make their lawns look more attractive. How would they like to apply pesticides to 1,400 acres of land every year to make a livelihood?

Urban people do not have to worry about the long-range effect of pesticide and nitrate residues in their well-water. They do not get hog lung from their life's work. OSHA is there to help protect them from being injured and killed on the job. Rural people, especially farmers, are exposed to a host of hazards and illnesses that demand adequate health care as well as a medical profession that is trained in these unique occupationally related illnesses.

I believe that the consciousness of the farm community is being raised concerning farm safety and health. In fact, the Farm Family Survey conducted by the University of Iowa showed that farm safety and health

ranked equal to or higher than other concerns such as farm commodity prices, social erosion, and environmental issues.

This same survey showed that farm magazines ranked as a top source of information for farm families and a great vehicle for health and safety articles. There is no question that the media can play a large role in keeping people interested and aware of farm safety and health. I must say that it is difficult for farm magazines like mine to sustain heavy coverage of farm health and safety articles without, number one, considerable research and activity in this area by other interested parties; and, two, positive feedback from our readers demonstrating readership of these issues.

More recently, as a member of the farm media, I have been reminded of the responsibility not only to write about these issues but also to portray proper safety and health practices throughout the magazine in the photographs that we feature.

For instance, as I mentioned earlier, in the late 1970's and early 1980's, it was less common to feature farm safety and health in our magazine. My editors would tell me that we are not in the business of "reminder journalism." That means that because farming is hazardous, and we are a farm magazine, we cannot write an article every month reminding our audience that they need to be careful. That is unless, of course, we have a news angle or new research to feature.

For many years, extension safety specialists, such as Bill Field, at Purdue University, and Rollin Schnieder at the

University of Nebraska, were laboring trying to make a difference. This was despite government cutbacks in funding farm safety at land-grant universities. They were and still are operating on a shoestring. It is difficult for the few of them who work so hard to generate enough research or programs to keep up a continuous flow of agricultural health and safety stories for the media.

Now other organizations, agencies, and institutions have begun to focus on farm safety and health as an issue and to obtain funding for activities and research. It is much easier for me to propose a story and have it accepted by my editors. The topics of safety and health still need to compete for space in our magazine with articles about production and business.

More recently, as a member of the farm media, I have been reminded of the responsibility not only to write about these issues but also to portray proper safety and health practices throughout the magazine in the photographs that we feature. For instance, if a photographer takes a picture of a farmer driving a tractor with an extra rider and we use it on the cover of the magazine, are we giving tacit approval to this unsafe practice? Or if a photographer shows a farmer applying chemicals without proper protective clothing and equipment, are we encouraging unsafe behaviors?

This is a difficult area. In reality, of course these situations are the norm in farm communities. Another factor is that virtually all of our photographers are freelancers who have no farm background. I am a member of the Iowa Farm Safety Council. At their suggestion, I am contacting all of our freelancers, sending them materials explaining the need to portray safety and health in photos as well.

It is an uphill battle, and we will not accomplish as much unless we all work together. As I interview sources and write stories about farm safety, however, I have become aware of professional jealousies and heard harsh criticisms.

The issue is not, I think, which group has done the most. We are all needed. This includes traditional groups such as extension safety specialists, who have paved the way, as well as hospitals and universities who have begun to make a substantial contribution. Each group has its own strengths and weaknesses.

We are working on an issue that affects people's lives. As a farm writer, I appreciate the perspectives of the entire spectrum of individuals committed to the cause of farm safety and health.

It is great to think that the Surgeon General's Conference is focusing on farm safety and health. It is gratifying to see so many of you here today. As I look out over the audience, however, I can not keep myself from thinking about others who are not here today to benefit from these sessions about farm safety and health.

For instance, I think about Lloyd Hinshaw. He was a 41-year-old farmer who killed himself, a victim of depression and stress. In the winter of 1981, I interviewed his widow and two other farm couples attempting to cope with financial stress. Then I wrote an eight-page article about the effects of stress on farm families.

I wish that we could turn back the hands of time so that Indiana farmers Bill and Ann Friend could be here today. I grieved with them at their kitchen table 8 years ago over the loss of their 17-month-old daughter in an accident in their farm

driveway. I wrote about their nightmare in the magazine in 1983. For several years afterwards, Bill could not bear to continue his volunteer work as an EMT. Today, however, he is back helping others in his community again, at accident scenes.

It is too late for Jim Arnold. After studying accounting and agricultural economics for 3 years, he quit college to return to farming. His love of farming and overpowering desire to make it his life's work despite the obstacles is not unique. In Arnold's case, however, the challenges are greater. The 36-year-old Nevadan lost both arms and legs 10 years ago in a powerline accident on a farm. *Successful Farming* helped to sponsor two national conferences for disabled farmers. We also sponsored the Iowa Easter Seals Farm Program and are breaking new ground at Purdue University.

I think about Jeannie Johnson of Canton, Missouri, who was widowed with a 5-

month-old son and a 7-year-old daughter. She will never forget the day 9 years ago when her husband was killed in a grinder-mixer accident. Her story appeared in our magazine 4 years ago.

I do not believe that I will ever forget these people or their stories. I wish that they could have benefited from the attention that farm health and safety is getting here today. It is my hope that, as a result of this conference, in the future others will. We are all here today because we are involved in safety and health issues. I am grateful for the opportunity, which my job gives, to me to meet people like you who are so vitally involved. As concerned individuals and members of the medical profession, we all have a role to play in the future health and safety of agriculture and its people.

Thank you very much for your attention. I would be happy to visit with you afterward.□

## MULTILINGUAL TRAINING

*By Malanie Zavala, B.S.*  
Farm Worker Safety Coordinator  
University of California-Davis

Although the topic is multilingual training, my own expertise is Spanish-language training specific to pesticides. I am going to limit my comments to those two particular aspects of this larger question. That is what I know.

My job at the University of California is to develop and present pesticide safety training material to the people who handle pesticides on the farms and who are not necessarily certified. They have not passed any examination or had formal study on how to handle pesticides. I also provide training for farmworkers who never handle the pesticides but work around them.

In California and a lot of other states, many people who work in the field are foreign. Certainly, the largest percentage are Spanish-speaking people, from Mexico mostly, and also from Cuba, and a number of other countries, as well as from Puerto Rico.

These people will require some training in California if they handle pesticides. In other states, the training is not required, but these people need to know a lot about pesticide safety, because they are working with or around them.

In California, there are stories every year, and you have already heard some of them. Ellen Winess yesterday mentioned the story of a crew that was directed to go into a field that had been recently sprayed.

They all got sick because they had gone in too soon.

There were no re-entry signs up warning them to stay away, and since they did not know the symptoms of pesticide poisoning, they did not know what was happening to them. Even their crew leader did not know what was happening. That is not a good situation.

What I plan to do in this presentation is to talk about some of the requirements for developing successful and creative pesticide safety training material and any kind of safety training material for people from other language culture groups. Even though my comments are going to be limited to Spanish-speaking people, I am pretty sure this sort of information can be extrapolated and would fit any culture or group.

Also, I want to talk about some of the common errors and problems that come up when you are trying to develop educational materials to reach other language groups, and finally to suggest, perhaps, some ways to facilitate effective communication.

### REQUIRED SKILLS FOR SUCCESSFUL COMMUNICATION

Let me talk about some of the required skills for doing a good job of developing multilingual pesticide or other kind of informational training material.

► First—some of this is going to seem pretty obvious or simple-minded to you—but you would be surprised, however, how often it comes up—the translator, or the interpreter, the communicator, the person who is either translating the material or who is talking directly to the target group, needs to have a reasonable understanding of the subject matter.

It is not enough to speak both languages. You need to know the appropriate terms. You need to know enough so that when you are doing your translation, you do not misinterpret something that is written in English or that was told you in English, in such a way that it means something else when it is said in Spanish or the other language. I have seen this happen frequently. So it is important that person have that skill, that they must know something about the subject they are talking about.

► Second, the person needs not only to be able to speak both languages, but they also need to be articulate in both languages. It is one thing to be bilingual or multilingual and another thing to know how to effectively communicate in the language(s) you speak. Suppose you were raised in a Spanish-speaking home, for instance. You grew up speaking Spanish. You learned English in school. English is a preferred language for you, which is usually the case for kids who grow up in another-language home. You know how to speak Spanish.

That does not mean you can put together articulate sentences and communicate with people. It is not the same thing. Interpretation and translation require very real and very significant skills. That is something I am afraid is often overlooked.

► Finally, what you need to have for a successful training or information provision to other language groups is a basic understanding of the social characteristics of the target group. To put it differently, you need a cultural awareness. For instance, suppose you are a graduate student in Spanish. Your Spanish is great. You can speak very well. That is just fine, if the people you are communicating with are people with similar cultural and social-economic backgrounds.

You would know how to talk to them. You would be able to communicate with them in English too. But that does not necessarily mean that you are able to speak to a typical farmworker.

The register of the language is different. The kinds of terms that farmworkers are familiar with are going to be different. Often you see the mistake of somebody using language that is too technical with terms that people do not know, and that mistake needs to be avoided.

In order to successfully teach something, you need to understand a number of things about your audience. You need to understand their prior learning and reading experience. Frequently Spanish-speaking people who come to this country to work, and I am sure this is true of other cultural groups as well, have a sixth-grade or less education.

Somebody like that is not going to want to sit down and read an eight-page leaflet. It is not something that is going to appeal to them. I am not saying that they cannot. Certainly, there are people who come here who have had a better education and who would be comfortable with this means of communication. It is not the kind of thing

that is going to be real appealing to the majority. That is just a fact.

Another thing you need to keep in mind is when you are presenting information to somebody, you have got to consider their background, opinions, or assumptions regarding the subject matter. In the case of pesticides, it is common in Spanish to refer to pesticides as *medicinas*, medicines for the plants.

This means that even though pesticides have gotten bad press and people are very nervous about them, for many farm workers pesticides are seen as something good. They are good, of course. They have a very important function. But at the same time, they are dangerous.

It is hard to communicate the idea of something being dangerous to a group of people if they think of it as medicine. You need to deal with that kind of assumption first and clarify to people that pesticides indeed are dangerous. This is again just one example.

Another thing about pesticide information. When people get poisoned by pesticides in the field, it is usually through skin contact. Normally, most people think of poisoning as something that happens when you swallow a poison. So you need to get past that idea and get people to understand that pesticide poisoning can, and indeed does, occur because of skin contact. These are just a couple of examples of the sorts of assumptions that people come into meetings with, or start reading something with. You have to take that into account and deal with these assumptions at the very beginning so that understanding is reached.

I think we need a knowledge of the kind of reading and educational materials that the people are used to seeing.

The University of California just developed a training booklet to help farmers comply with the California regulations requiring that all people who handle pesticides, who have not passed an examination for certification, receive training. This training covers a number of specific points, and is pesticide-specific.

If you train a worker to use malathion, and next week he is going to be using Round-Up, then he must be retrained for that other material. This pesticide training must be repeated each year, so that when a year has gone by, and he is starting to use Round-Up again, the training must be repeated for Round-Up. That is a very good law.

It is important that pesticide handlers understand about pesticide safety and how to take care of themselves and protect other people and the environment when handling these materials. Unfortunately, with a labor force like the one in California where almost everybody in the field is Spanish-speaking, it is very difficult to do that training. So this publication is bilingual. It is in English first and then Spanish, and then there is a picture.

We are hoping that by using this booklet, the trainer can go over the material with the trainee, reading in Spanish what the trainer is reading in English and then the picture will act as a pictorial link; we are optimistic that this will make compliance with training requirements much easier.

We chose a particular kind of "comic book" format because it is a very popular form of literature in Mexico. Hispanic

people—I do not know about Puerto Rican and other Hispanic groups—but in Mexico, this particular kind of comic format is very common.

They have what they call novelas—novels written in a comic book format. So it is going to be more appealing than just a lot of words. Plus, I think the pictures help bring the point home.

### **COMMON ERRORS AND PROBLEMS ENCOUNTERED IN CROSS-CULTURAL COMMUNICATION**

I am going to talk about some of the common errors and problems made when providing information to people from other cultures. I already touched on one: choosing the wrong level of language. As I pointed out, a lot of these people come here without an excellent education, and this is going to make a difference as to what they can understand in terms of reading—not so much in terms of spoken language, I think, but in terms of things that they are going to have to read. You want to choose a language that they are going to feel comfortable with, and this is going to take some knowledge of where they are coming from basically.

I already mentioned that if you give workers a multi-page leaflet to read, they are unlikely to feel comfortable with it. They might feel uninspired to read it, whereas the comic format or something like that would be more readable.

Then of course the language: you do not want language that is too technical or too academic. Again, do not misunderstand me. This is a question of education, certainly not intelligence, but education is a very real thing, and it needs to be taken into consideration.

On the other hand, like most Americans, the majority of workers listen to news shows and other TV programs, and they understand the level of Spanish, of course, that is being spoken on those shows. That is why when it comes to spoken presentations the same problem does not necessarily exist as does with written material. The audience will not have the same difficulty listening to something spoken as they would when it comes to the written word, and they will be able to understand things at the same level you would use to address any other audience.

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Choosing informational formats, which the audience does not like: I have already talked about that. Again, I cannot encourage too much the use of things like comic books, or photo novelas.

The photo novela is a very popular form of literature for many Spanish-speaking people. A particular photo novela comes to us courtesy—except I did not tell him about it—of Jim Grieshop, who is sitting in the back. He was working in Ecuador for a number of years developing informational material, and he and other people came up with this particular idea.

This is similar to the comic book idea, where you have got photos of people acting, and then you have the caption. It is an appealing form of literature and a com-



mon one, like the comic book, for at least Mexican people who come to the United States to work. This is another way to communicate, and I will have some other examples as we go on.

Another problem is choosing a translator or communicator who is not good. This is so common. When materials need to be translated, find somebody who knows how to do it. Especially in states like California, which has a large Hispanic population, there tend to be a lot of people around who speak Spanish. You can find somebody, perhaps, in your office—the receptionist who speaks Spanish or a staff member. Knowing both languages is not the same as being skilled at translating from one language to another, and I have seen some remarkably awful translations because of that.

You need somebody who is skilled, somebody who is a professional translator. It is expensive, but I dare say, it is worth doing when you have such a large number of Spanish-speaking or other language-speaking people working in agriculture in your state. It is worth the effort and the cost to get it done right. The trouble is, if you have somebody who does the translation for you, you do not speak the language yourself, and you have no way of knowing how good that translation is. How are you supposed to know?

That is the other thing. You should get somebody who edits translations so you have first a professional translator and then a professional editor who will read over translated material.

I have got a great example of a horrible translation. Here is a little example of sort of a syntactical error, I guess you would call it.

In English, you know, you sometimes hear "where possible"—that is not very common but you hear it—"where possible, do such and such." Literal translation of that particular phrase does not make much sense in Spanish.

Let me go over another translation. That is a really good example. "Slow squeeze at the turn, crossing obliquely on rough to polish or muddy surface." I will not say which state agency or from state it came because I do not want to embarrass anybody. But the whole thing this came from was like that. That was the very worst example. In the first place, there are wrong words for some things. Everything that could be wrong with this thing is wrong. It is a terrible translation.

Anonymous: What is it supposed to say? Well, my best guess is, "Drive slowly at turns... slow down when trying oblique turns on... rough and slick surfaces."

Not getting translations reviewed and edited by a second person who is also skilled in the language and knowledgeable about the subject matter is an error.

Another problem is typos when doing the final written version of something that has been translated into or written in a second language. The person who types written material is often someone who does not speak the second language. Therefore they will not be able to detect their own typos, and if they are working from handwritten or poorly typed text, they are sure to make mistakes.

There is a perceived problem with "differences in language." There are some differences between the kind of Spanish spoken by Puerto Rican workers on the east coast and Mexican workers on the west coast,

but those differences are not so great as to preclude understanding by one group of materials developed for the other group. This problem seems to be somewhat exaggerated in the minds of many people. In fact, Spanish-speaking people in the U.S. all listen to the same TV shows and news programs.

Overconcern with making materials culturally appropriate, e.g., the pork rinds vs. potato chips story.

Planning meetings and not getting people to come: many times these are not people in the habit of attending meetings.

Agendas: when you are trying to inform people, present the facts. Try to avoid hidden agendas, either in the form of "protecting" employers at the expense of workers, or suggesting to workers that all the responsibility for their safety falls on the employer.

1. Talk about employer responsibilities where it is relevant to the topic.
2. Talk about the worker's role in taking care of him- or herself.

### **SOME SUGGESTIONS FOR EFFECTIVE FORMS OF COMMUNICATION**

Illustrated guides instead of leaflets and manuals.

Informational videos, which are shorter than ½ hour, preferably about 15 minutes. Make them appealing; put in a little drama, some cute children, some humor, if possible.

Using appropriate forms of communication, i.e., find out what the target

audience likes to read and look at. Find out something about traditional forms of information transfer for your target group and develop materials using these formats. Mexican farmworkers often choose to read comic-style novelas, photo novelas and humorous comic books. Calendars with photographs are popular as wall hangings, and often more than one will be hung on walls, especially kitchen walls.

Because illiteracy is not uncommon among Spanish-speaking farmworkers, some pictorial materials, as well as the video format, should be developed to complement written materials. Public service announcements on radio and TV are very effective in reaching large numbers of people.

Use some organizations as a vehicle for getting people together if you want to give an informative presentation, such as:

- Secure employer cooperation to provide safety during work time.
- Hold migrant housing meetings.
- Offer something attractive to attendees, other than information (food, music).
- Involve organizations to which they will respond, such as the church.

Find an effective means to distribute written material, such as:

- Through church.
- At health clinics.
- Through employers.
- Through TV and radio announcements.

## CONCLUSION

There are large numbers of foreign speaking/reading people working in agriculture in the United States. They are largely responsible for our cheap food. Since there are real dangers associated with agriculture, we have a responsibility for giving the kind of information to these people and their families, which will help keep them healthy.

Going through the motions of providing information without focusing on the effectiveness of the material we produce is not enough. Materials that do not get information across to the audience can be worse than no materials at all. Employers, public officials, health professionals, etc. may end up believing that adequate warnings, prevention instructions, health hints, etc. have been given when that is not the case.□

## COUNTY HEALTH EDUCATION

By Larry Belmont, M.P.H.  
County Health Education  
Director, Idaho Panhandle Health District 1

We cannot expect physicians to locate in all of our small rural communities. Our next best alternative is to develop new solutions or new systems of service to cover those areas. Our rural citizens and our rural environment are worth protecting, for this is our heartland.

Idaho has such a system and I would like to show you how we have been able to serve our rural citizens quite well through our local public health system of decentralization with coordinated control.

We will focus on the elderly in Idaho because they make up the growing population in our rural environment.

"Rural" is defined as "those counties that do not have a city of 20,000 or greater population." This applies to 37 of our 44 counties.

Our presentation describes how our district health department system implemented an urban program in a rural environment. Idaho's regionalized and decentralized public health system may serve as an interesting model for other states.

Dr. Roper mentioned that the Institute of Medicine report, *The Future of Public Health*,<sup>1</sup> states that public health in America is in "disarray," and as a nation we have "lost sight of" our "public health goals." In Idaho we decentralized public health services, but we maintain coordinated control

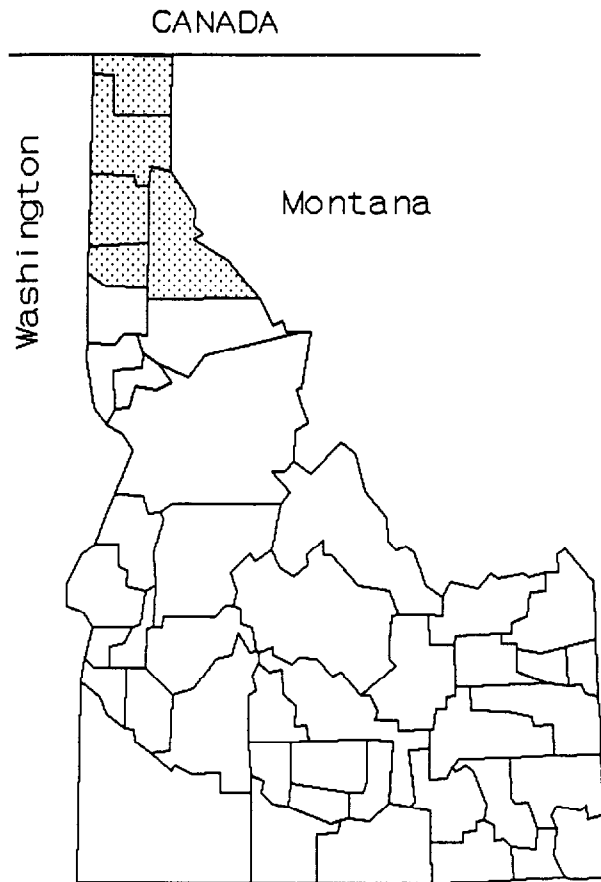
among seven district health departments. We are not in "disarray."

The concept of regionalization and decentralization with coordinated control helped Idaho to develop district health departments that provide public health services throughout the state in a coordinated, efficient, and effective manner.

Regionalization and decentralization with coordinated control greatly enhance the Senior Companion Program of the Panhandle Health District. This service provides many part-time volunteer opportunities for low to moderate income persons age 60 and over. The program renders supportive person-to-person services to older adults.

There are 44 counties in the state of Idaho. Each county is divided into one of the seven health districts. The PHD, used in this discussion, is composed of the five northern counties bordered on the north by Canada, the east by Montana, and the west by Washington (Figure 1). The Panhandle is in a unique situation and must be able to respond to several different influences from two different states and another country.

The health districts were formed in 1970 and began operation in 1971. Before that time, only half of the 44 counties received local public health services. Now such services exist in every county.



**Figure 1.** Five Counties of the Panhandle Health District in Idaho.

Walter J. McNearny and Donald C. Riedel wrote a book entitled *Regionalization and Rural Health Care* several years ago. Their definition of regionalization remains relevant to current health care and delivery issues. They state "in its simplest terms applied to the health field, regionalization refers to the establishment of working relations among various health facilities and programs within a defined geographical area." The health districts have been doing exactly that over the last 20 years.

Some of you may have been around in the late 1960's and 1970's and recall the Re-

gional Medical Programs associated with medical schools.

1. Their function was to develop regionalized medical care systems in order to improve heart disease, cancer, and stroke. The Regional Medical Programs defined some key elements of a functional region. A region has a population and needs that are identifiable and quantifiable. This can produce identifiable performance indicators for specific problems to be attacked and, thereby, be easily measured.
2. There are cooperative arrangements among components of the medical care system in that region. This certainly was true with the health districts of Idaho. For example, we all have contracts with private physicians who work in our local clinics.
3. The region should represent a defined geographical area.

Again, each of the districts is geographically defined. There are needs being met by local effort with help coming from outside the region.

The PHD, as a regionalized, decentralized public health department, became a sponsor for the Senior Companion Program for several reasons. It extended our home care in more rural areas. It increased coverage where Medicare, Medicaid, and private insurance end. It extended our continuum of rural health care. In doing this, we accomplished several of our primary objectives:

1. To help people assume a greater responsibility for their own health care.

2. To help people live independently for as long as possible.
3. To increase referral capacity with other groups and create a sharing of services, as in a Medical Model.

Other services offered by our home health division are professional nursing services, physical therapy, occupational therapy, speech therapy, home health aides, health maintenance services, and consultation services. Since its inclusion in the home health division, the Senior Companion Program has dovetailed with these other services to become an integral part of the entire realm of patient care services.

Our Senior Companion Program in the PHD fulfills several related functions:

1. To develop volunteer service opportunities through which low-income older persons can contribute to their communities.
2. To provide a stipend and other benefits, which enable eligible persons to participate as senior companions without cost to themselves.
3. To establish new social service roles for low income older persons through which they can maintain a sense of self-worth, retain physical health and mental alertness, and enrich their social contacts.
4. To provide supportive services to older adults in an effort to maintain independent living.

These functions need special help when implemented in a rural environment. Idaho's system provides the mechanism for this service. The IOM study<sup>1</sup> supports the notion of decentralized services, such as

Idaho's model, to facilitate flexibility and self-governance at the local level. The IOM recommends:

*To promote clear accountability, public health responsibilities should be delegated only to a zone unit of government in a locality (p. 8).*

Where sparse populations or scarce resources prevail, delegation to regional single-purpose units, such as multi-county health districts, may be appropriate (p. 149).

In light of Idaho's success with regionalized health districts and the IOM's recommendation, Idaho's district health department concept may be a viable option for other states.

There is no single entity in charge of the seven health districts. We are autonomous and independent of one another. However, we work very closely together on statewide issues.

For example, the District Boards of Health in all seven health districts meet together to coordinate policy issues. They have just met with certain legislators in Boise to negotiate policies concerning environmental health programs throughout the entire state.

The District Directors also meet monthly to coordinate program implementation and standardize policies on the operational level. This process also applies to the nursing directors and the environmental directors of all seven health districts.

Each district health department has its own Board of Health, which is appointed by the County Commissioners within that health district. They set local public health policy. The District Directors are hired by

that Board of Health, and not other bureaucrats in the capital, making the director directly controlled by the local Board of Health and the local County Commissioners who set the budget. Although our orientation is very local, we must still coordinate statewide policy throughout the state for certain programs.

The funding of the health districts comes from several sources. County *ad valorem* tax dollars are matched with state contributions. In addition, the state can give the health district additional assignments and, hopefully, funding.

We are free to implement our own fees. Some are standard throughout the state. Others vary between health districts. Each district has contracts with the state Department of Health and Welfare and other agencies. We seek grants and additional federal funding, if available.

A county's contribution to the health district is calculated by a very equitable and fluid formula. Seventy percent of the county money is based upon the county population. The remaining 30 percent is based upon the county's market value for taxing purposes. This formula allows a county to adjust its annual contribution depending upon economic conditions, which impact both the population and the market value of property.

The health districts in Idaho are not state agencies. They are independent, single-purpose districts much like a school district in any other state.

The health districts in Idaho are required by law to provide physical health services, environmental health services, health administration, and health education. The PHD has, in addition to those basic func-

tions, a superfund project; a specially funded aquifer project; a home health division; the Senior Companion Program, which we will talk about in more detail; and Women's, Infant's, and Children's (WIC) Program.

Urban-designed services, like the Senior Companion Program, benefit greatly from Idaho's public health concept of decentralization with coordinated control when applied to Idaho's rural population.

The Senior Companion Program is authorized by the Federal government under Title II, Part C, of the Domestic Volunteer Service Act of 1973. The program's dual purpose, as mentioned before, is to create part-time stipend volunteer community service opportunities for low-income persons aged 60 and over, and to provide supportive person-to-person services to assist elderly adults needing special assistance to remain living independently.

Each Senior Companion Program is partially funded by a grant from ACTION, the Domestic Volunteer Service Agency. A requirement of these grants is that a sum equal to 10 percent of the Federal grant be raised from local sources to contribute to the program. ACTION awards these grants to sponsor a program only to public agencies and private non-profit organizations, which have the authority to accept and the capability to administer such grants, i.e., Idaho's health districts.

There are currently about 140 Senior Companion projects throughout the United States, which provide 8,000,000 hours of service a year to 25,000 clients. As one of the original pilot projects in the United States, our program has expanded from serving about 80-100 clients to the current

average of 260-270 clients served in any one month.

Volunteers in the program are assigned to agencies related to specific community services. These agencies are called volunteer stations and they accept the responsibility for the assignment and supervision of senior companions. Two basic types of agencies normally serve as volunteer stations.

- ▶ The first type is social service agencies, which include public agencies, private non-profit agencies, multi-purpose centers, community and civic organizations, and religious groups.
- ▶ The second type of volunteer stations is direct health care providers. Examples of these include acute care hospitals, rehabilitation centers, public health departments, private non-profit health agencies, visiting nurse's association, home-health agencies, mental health agencies, and nursing homes.

Senior companions are supervised by professional staff at the volunteer stations to which they are assigned. This staff develops an assignment for the senior companion, which incorporates a written plan of care for each client served. This plan of care is coordinated and monitored by the same staff, providing for periodic evaluation of the client's continued need for a senior companion. The professional support of the PHD staff in each county lends considerable efficiency and credibility to the program. The volunteer, the client, and the PHD benefit from this synergistic relationship.

Senior companions must, in addition to being age 60 or older, meet a moderate income guideline based on the size of the

household. Companions can work a maximum of 20 hours a week for which they receive a stipend of \$2.35 an hour and \$0.20 a mile to travel to and from their clients' homes. These funds are intended to reimburse senior companions for expenses of volunteering and may not be considered as wages or income for tax purposes or any government program.

Recruitment of appropriate volunteers to serve as senior companions is accomplished by several different methods, which include advertising in newspapers and other media, and by word-of-mouth referral from volunteers serving in the program. An unexpected source of volunteers has been patients who have been senior companion clients and have recovered to the point that they wish to volunteer their services to the program.

The total budget for the Senior Companion Program sponsored by the PHD is \$278,542, of which \$211,637 is furnished by the Federal ACTION grant. The remainder is furnished by the PHD and other local sources.

Sixty-four percent of these funds are spent directly on stipends and travel expenses of senior companions. With these funds, we recruit 80 senior companions who provide approximately 5,400 hours of service a month to 260-270 homebound clients.

Fiscal viability is another advantage to the affiliation of the PHD with the Senior Companion Program. With a sizable portion of the funding being provided through the ACTION grant and other local funds, the PHD's financial involvement can be kept to a manageable level.

Much of the contribution to the program by the PHD is in-kind assistance, supervi-



sion, and advice by the professional nursing staff. Also, this partnership of the PHD and Senior Companion Program allows for all yearly physicals for the senior companions to be done by the nursing staff, making it easier to pick up any health problems that might arise. This affiliation between the program and the PHD has enabled the program to be established in a more medical model than other similar programs.

The senior companions are given more specialized training in medical areas and are viewed as a new type of para-professional volunteer. This, coupled with the maximum interaction with other segments of the health care and social service community, allows optimum use of the professional staff at these other agencies.

A by-product of the Senior Companion Program PHD medical model is an outreach function provided by the senior companions. With specialized training and assignments in rural areas, they serve as eyes and ears, often detecting problems with homebound, unseen elderly that may otherwise have gone undetected due to their rural location.

The design of the Senior Companion Program, as outlined by ACTION, seems to make the program more geared to location in an urban area. It is more difficult to assign persons age 60 and over to rural clients with less access to professional staff for advice and assistance.

A prime consideration in placing senior companions with clients is to match the volunteer's specific skills to the needs of the particular client. This holds particularly true with clients in the very rural areas where the companion may have limited access to resources.

In continuing the medical model, specialized volunteer stations have been established to provide services to clients with very specific needs. Two examples are the Alzheimer's Association and the discharge unit at Kootenai Medical Center and Acute Care hospital. These volunteer stations have clients with very specific needs that are quite different from our other clients.

The care provided for clients of the Alzheimer's Association is respite care for the primary caregiver, enabling the client to remain at home with the family as long as possible. Specific training to the senior companions working with Alzheimer's patients is provided by the Alzheimer's Association with ongoing in-service training providing updates and support for these volunteers.

Very different although specific training, enabling volunteers to work with recently discharged patients from the hospital, is provided by professional staff in the social service and discharge units of the hospital. Specialized volunteer stations with specialized training, coupled with access to professional nursing staff at the PHD, allows services to clients not easily found in rural areas. This helps many clients stay in their homes longer.

In closing, we will not get physicians into all of our small towns of Idaho nor Iowa. That is not all bad. We have other solutions, other systems of rural health care.

The concepts of regionalization and decentralization with coordinated control improved the efficiency and effectiveness of Idaho's public health services in rural areas. These concepts provide the foundation for expansion of an urban program,

## Intervention – Safe Behaviors Among Adults and Children

like the Senior Companion Program, into a rural environment. It allows us to move the Senior Companion Program into a medical model in order to expand our continuum of rural health care.

Idaho's system of regionalized and decentralized public health services with coordinated control works. I hope other rural states can benefit from Idaho's success.□

## REFERENCE

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## A RURAL SOCIOLOGIST'S PERSPECTIVE

By Judith Bortner Heffernan, M.A.  
Columbia, Missouri

Dr. Walter J. Armbruster: Judith Heffernan is Executive Director of the Heartland Network for Town and Rural Ministries located at the University of Missouri in Columbia. Her topic is *A Rural Sociologist's Perspective*. That is a pretty broad topic, which gives her lots of liberty. Ms. Heffernan wants to focus our attention toward thinking more broadly. Ms. Heffernan:

I would second the motion that many have made of how honored each of us feels to be a part of this, and I know that that is true whether you are a speaker or a participant in other ways. It is wonderful that such a conference could be held.

My colleagues have been sharing a bit about their backgrounds. I think it is important to do that at this point.

I did not come to be a practicing rural sociologist and a real honest-to-goodness farm woman quite as I might have planned. I thought the guy I met about 26 years ago and married 25 years ago was going to be a professor of rural sociology, and that our lifestyle was going to be an academic one. While that is, indeed, part of our "schizophrenic" existence, the other part of it is being a practicing rural sociologist.

We will, in the next few months, if the contractors put the roof on the house soon, move from our farm of 21 years to the only farm the state of Missouri ever identified as "the Model Farm"—120 years ago.

Just so you know that I do understand this issue of agricultural health and safety, you need to know that I plant soy beans and wheat, and I mow and rake hay, sometimes under duress.

I have been a midwife to more cows than I care to count, and a substitute mom this year to sheep—baby lambs—cutest things you have ever seen. I have gotten sick from breathing diesel fumes, whether on a tractor when we were working on one in a shed or just standing nearby. I have gotten sunburned from being too long on the tractor while mowing, and I have been pinched and poked and clobbered by more varieties of machinery parts than I care to tell you.

I have also been chased by angry livestock. I have unhappily taken out a fence with a disk, which was not the original intention. It could not quite turn short enough.

I have been running the combine and the stalk chopper when one or another part has broken, and I have had the experience all too often of driving the pick-up ahead on a too-narrow road when behind me were following my husband or our daughter on too wide a piece of equipment moving from one farm to another.

I have had the frightening experience of seeing my husband climb out of the grain bin after checking its condition and shortly thereafter become very ill. (We had completed the wheat harvest in October of 1981 instead of in July because of an extremely wet summer and the wheat was in

poor shape.) After climbing out of the bin, he spiked a high fever and laid down. I recall being so panicked by his condition that in my confusion to get help, I called the University's vet clinic! After calling the Medical Center and not learning very much, I called the Department of Plant Pathology at the University of Missouri and found out that very likely what he was experiencing a serious allergic reaction to mold, to toxins in the molds, that were undoubtedly in the wheat that year. Even though I had enough knowledge to know who to call when I did not get helpful answers from initial contacts with medical personnel and enough assertiveness to keep calling, the experience was still terrifying, to say the least.

I have worried about my husband teaching our young daughter, at the age of six, to drive the Ferguson tractor, and to help him put in an electric fence.

Just last Friday, I had the frightening experience that many farmwomen share of realizing that he should be home, and he was not. So you leave a note on the counter, in case you miss on the highway, and you take off to the field not knowing whether the reason he is late is because he is injured. I almost break into tears thinking about it. Fortunately, it was just that I misunderstood how late he was going to be home.

Last Saturday, I had another experience that very much relates to this conference. I was about to wash a pair of blue jeans and a dirty shirt of my husband's, when he said, "Don and I were spraying Round-Up yesterday, and these really should not be washed with everything else."

I asked, "What does the manufacturer suggest that I do with them?" I wish that

there were on the containers of chemicals a little "sticky" that you could peel off and husbands or wives or whoever is doing it could attach to their clothing that says:

"Will the laundry person please adhere to the following instructions: Soak thirty minutes in hot water and detergent or whatever the correct method is." Would not this be simpler?

The point I am making here is that I am as personally acquainted with the issues of agricultural health and safety as I hope I ever get.

I am also a rural sociologist by training, as Walter indicated. Since June of 1989 I have been working with the Heartland Network for Town and Rural Ministries, a effort to bring resources for hope and help and empowerment of churches and communities in America's Heartland. While the Network is funded mostly by the United Methodist Church, I work ecumenically with a variety of faith groups.

The remarks that I am going to make today come out of this context—not only out of my personal lifestyle, but also out of my professional training. It seems to me that if we are to consider the safe behaviors of adults and kids, as all of us have been in the process of doing, it would be helpful to look at agricultural production and processing in a larger context. We know that there is a social, and an economic, and even a psychological-emotional context that impacts all human behavior.

I think we also ought to acknowledge initially that rural communities differ. There are some rural communities that are doing fine. Economically they are thriving. Retired people with money are moving into them; or the government continues to

fund the university, or the prison or whatever there is energy; but farming communities, and forestry, and rural manufacturing communities are among those that are hard-hit.

My three-point thrust is 1) the context of farming as practiced in the 1980's, and where it appears we are heading in the 90's and beyond, 2) the context of the rural community, and 3) the proposed future context of globalizing agricultural production and consumption. All three issues impact on the kinds of safe behaviors that we look at with regard to adults and children.

It is my intent to raise some important issues and ask some thoughtful questions. My experience over these past 5 to 10 years working with the rural crisis—especially in the Midwest but also traveling coast-to-coast, into Canada and into other countries—looking at what has been happening has changed my world view. And so, that is partly what I am sharing.

### **FARMING IN THE 1980's AND 90's**

As the structure of agriculture has changed over the years from a locally oriented, locally managed, locally run, local profit-centered kind of agriculture into initially a regional and then a national, and now an internationally oriented and controlled system, the units with which farmers have dealt have become much bigger, much farther away, and much fewer. We are no longer dealing with the folks down the road, the local suppliers and dealers know.

Decisions are now being made elsewhere about nearly everything even about what size cattle processing plants will accept. Farmers no longer get to decide how many

pounds they are going to put on those steers before they send them off.

In fact, feeding steers has become so specialized that if you live in Missouri, you have to pay somebody to take them to Kansas, or maybe Nebraska, pay to have them specially fed-out and pay the transportation. Decisions like that are no longer made on the farm. They are made in some office by a processor who says "this is all we want and only this will we accept."

Competition in the local market has declined. There may be only one buyer at your local sales barn, or if there are two, they may be very friendly, and they decide that 80¢ for cattle is just about "max." When the price goes higher, they leave. So much for the so-called law of supply and demand!

With this change, the profits, I might add, have moved away as well. Profits that formerly went to management and capital are no longer available in the local community.

For the most part, the profits that go to labor are the only ones that remain. Frankly, folks, if we put this in a larger context, it used to be that some of the profit went to Minneapolis or went to Omaha, or went to other major U.S. corporate centers.

In Indiana now, when you sell hogs to the processing plants, those profits go further away: to Milano, to Tokyo, to London. You cannot sell a hog to be processed in Indiana to an American firm. Ferruzzi and Mitsubishi in Northern Indiana and British Petroleum with a firm that they own in Columbus are the two hog slaughtering firms in the state. This is the kind of thing that is happening.

There is a social movement afoot that environment, food safety, pesticide usage and water quality among others. We have heard much of it here.

Larger organizations have, indeed, protected themselves by their size, their ability to control markets, and, to some degree, their diversity. The stories in some of the farm magazines about whether red meat will be able to compete with white meat is laughable to some of us who have been watching what it happening. It is the same firms that are controlling markets in both red and white meat, so where is the competition? It is mostly with the nutritionists.

Those firms have been able to reduce their own risk and increase their stability and, I might add, their predictability. Just for the record, during what was a devastating time for production agriculture in the 1980's, most of those firms were able to maintain at least 20 percent profit. Should we producers be envious? The level of profits of food processing firms in the 1980's was exceeded only by pharmaceutical firms!

So what economists have come to call risk, namely the inability to control things in the environment, which have a great impact on you, psychologists and sociologists call stress.

I recently spent some time in the Food and Agricultural Policy Research Institute office looking at a few of their publications. From their 1991 *U.S. Agricultural Outlook*, I will read to you the last line of the "General Outlook. "Net farm income is small, relative to farm receipts and expenses. So, relatively small changes in estimates of receipts or expenses result in

very large proportional changes in net farm income estimates." That, by any definition, seems to me to spell "risk" and also "stress."

There are other risk factors at the moment that may very well alter the way farm families and rural people look at safety and health issues. There is a social movement afoot that focuses on the environment, food safety, pesticide usage and water quality, among others. We have heard much of it here. All of these concerns add higher levels of unpredictability and risk in the agricultural system at the moment.

I know farmers who find going to the Agricultural Stabilization and Conservation Service (ASCS) office very stressful. I wish some of you in the Public Health Service would set up little health screening clinics right outside the ASCS office doors to check blood pressures of farmers. I read with interest an article in the *Farm Journal* by a farmer with a computer who analyzed three different alternatives for working with the 1990 Farm Bill. As nearly as I can tell, it was to choose the alternative in which you lose the least amount of money. That, to me, is risk-stress.

The uncertainty and complexity of ever-changing rules and regulations, such as those administered by government agencies have increased uncertainty and risk and have made it very difficult for farmers to say, "I think I am going to try a new safety system on this farm. I think I am going to invest in whatever it costs," although I did hear myself saying to my husband last night, "Honey, we have got to buy roll-over bars." That is on the agenda. But we, with other income, can probably do that. I know people who are borrowing money to

put bread on the table who are financially unable to buy safety equipment.

Another aspect of the stress issue is what happens to farm families is when they experience financial difficulties over time. Many of you are familiar with our data, so I am just going to spend a few moments showing you a little bit in more detail.

Figure 1 shows the reaction to stress of the families that we interviewed in 1985 at the suggestion of the Department of Agriculture. We were actually trying to figure out a number of things that were going on, and we went into a very produc-

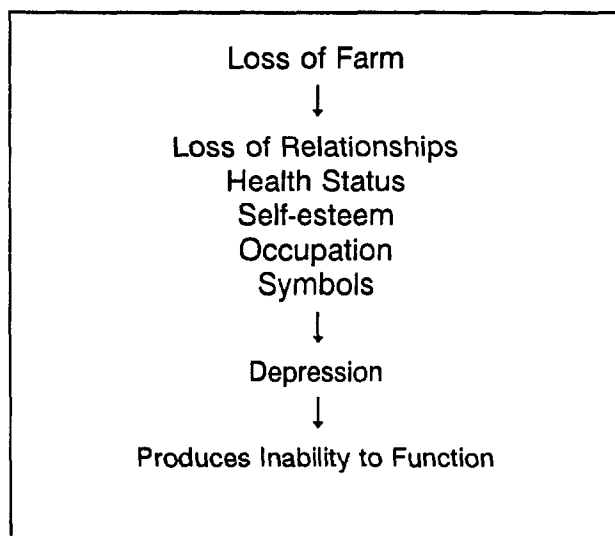
tive county in north central Missouri and interviewed every family that had left the farm for financial reasons from January 1, 1980, through January 1, 1985. Many of you are very familiar with these data.

Those of you in the health services will recognize this as a list of common reactions to stress. We simply said to husbands and to wives separately, "Please tell me in the process of losing your farm did you become depressed? Do you continue to be depressed over this issue? Did you experience all of these other things?" What you will note here is the astonishing high levels of women and men who became depressed.

	<u>Have Experiences</u>		<u>Continue to Experience</u>	
	Men	Women	Men	Women
Became depressed . . . . .	97	100	56	72
Became withdrawn from family/friends . . . . .	62	66	26	41
Became nauseous, lost appetite . . . . .	49	47	18	34
Could fall asleep at night, but would awaken and be unable to return to sleep . . . . .	77	53	41	38
Experienced feelings of worthlessness . . . . .	74	69	49	41
Became restless, unable to concentrate, agitated . . . . .	72	81	41	38
Did anything to keep busy . . . . .	67	41	46	31
Increased smoking . . . . .	23	25	16	22
Increased drinking . . . . .	18	12	10	6
Showed increased fear of things, people . . . . .	38	31	18	25
Became more physically aggressive . . . . .	49	31	26	9
Experienced great changes in moods, from low to high and back . . . . .	67	81	36	47
Became confused . . . . .	54	31	31	19
Became unable to think or respond logically . . . . .	31	34	18	19
Become unusually silent for periods of time . . . . .	62	53	44	28

Figure 1. Reactions to Stress (percent).

It goes on further showing increased fears of things and people, becoming more physically aggressive, perhaps a measure of family abuse. One farmer said, "Does that mean I spank my children more frequently?" I said, Well that is one way of defining it. You can also see in these data high levels of confusion, withdrawal and remaining unusually quiet for long periods of time.



**Figure 2.** Effect of the Loss of the Family Farm.

These data and Figure 2 show that the loss of the family farm was a much greater catastrophe for those farm families than many would like to acknowledge. It was much more encompassing than loss of a job. The loss we are dealing with was huge, and I think that has been elaborated.

A psychologist I know is also a Mennonite clergyperson put this chart together, and I think it really does give a fair amount of insight. The loss of the farm led to loss or change in every relationship the family had, not only with themselves, but within the community as well.

It also led to a loss or change as far as health was concerned. Health was affected, and those of you who know the statistics on the relationships between stress and health would understand this well.

Social status was changed. Self-esteem was altered considerably. You notice the numbers of those that said they felt worthless. Occupational status was changed. "My granddad homesteaded this, and I lost it," someone told me. The symbols were gone.

That kind of loss almost inevitably depresses people if they are normal. I would sometimes tell the farmers, "if you have gone through all this and are not depressed, there is something wrong with you, and you need to go find out what it is." In some cases the depression led to an inability to function.

Last year we took the names of every freshman that entered the College of Agriculture at the University of Missouri to do a study of the ways the rural crisis had affected them. (We know that rural kids study in areas other than agriculture, but we limited our study to just them.) We knew that they were likely eight years old in 1980 when things began to worsen on farms and in rural communities.

While I have not yet written papers on any of the data, I have shared it with a few audiences. I have taken the numbers that we just saw on stress in our 1985 study, and because we asked the same questions of the students that had been part of the farming operation or a rural business from 1980 to 1990, we show their results, in Figure 3, with those of husbands and wives in our earlier study.



By the way, a number of the students were more interested in the spring break in Florida than they were in my questionnaire, and so our response rate was about 30 percent.

We questioned them, "Did you become depressed?" The depression level was about half as high as their parents, but understand, we are talking about kids here who were from eight to 18 during the time on which we are focused. By the way, would you look at how many of them said they became withdrawn and experienced feelings of worthlessness. Forty percent of the students who were adolescents when their folks were losing the farm experienced feelings of worthlessness. As you can see, this goes on, and we could talk about

that in far more detail. I am simply indicating to you what we knew was, in fact, happening. We now have some data to support that stress was not something that just mom and dad experienced, but it was very much infectious, almost in the correct use of that term, and certainly did permeate through the family.

A number of my colleagues have pointed out that that continues. Paul Lasley at Iowa State and Jack Geller at North Dakota have indicated that the levels of farm stress have sky-rocketed. In Geller's study, 71 percent of over 1000 farmers indicated that during the previous three years, which would have been the mid 1980's, their stress levels had increased significantly.

	<u>Have Experienced</u>		
	Men	Women	Youth
Become Depressed . . . . .	97	100	57
Became withdrawn from family/friends . . . . .	62	66	57
Could fall asleep at night, but would awaken and be unable to return to sleep . . . . .	77	53	14
Experienced feelings of worthlessness . . . . .	74	69	40
Became restless, unable to concentrate, agitated . . . . .	72	81	39
Did anything to keep busy . . . . .	67	41	26
Increased smoking . . . . .	23	25	0
Increased Drinking . . . . .	18	12	14
Showed increased fear of things, people . . . . .	38	31	7
Became more physically aggressive . . . . .	49	31	14
Experienced great changes in moods, from low to high and back . .	67	81	39
Became confused . . . . .	54	31	32
Became unable to think or respond logically . . . . .	31	34	7
Became unusually silent for periods of time . . . . .	62	53	28

Figure 3. Reactions to Stress (percent).